

XX
AC AAU07141;
AC 24-OCT-2001 (first entry)
XX DE Human CRIM1 protein.
XX CRM-1; Human; human chromosome 2p21-16.3; ophthalmological; neuroprotective; gene therapy; neurodegenerative disease; eye disorder; cataract; bone morphogenic Protein; Bmg; renal disease; bone abnormality; tooth abnormality; wound; S52.
XX OS Homo sapiens.
XX PH Key Location/Qualifiers
FT Peptide 1..17
FT /label= Signal-peptide
FT Domain 1..901
FT /label= Extracellular
FT /note= "This sequence is specifically claimed in claim 15."
FT Protein 18..1036
FT /label= Mature-CRIM1
FT Region 200..207 "Conserved N-terminal motif"
FT Region 336..391
FT /label= CR_1
FT /note= "Cysteine rich repeat"
FT Region 433..456
FT /note= "CR_2"
FT /note= "Cysteine rich repeat"
FT Misc-difference 414
FT /note= "Encoded by GAC"
FT Region 608..662
FT /label= CR_3
FT Region 679..734
FT /label= CR_4
FT /note= "Cysteine rich repeat"
FT Region 753..808
FT /label= CR_5
FT /note= "Cysteine rich repeat"
FT Region 819..873
FT /label= CR_6
FT /note= "Cysteine rich repeat"
XX WO200138519-A1.
PR 31-MAY-2001.
XX 24-NOV-2000; 2000WO-AU01435.
PR 26-NOV-1999; 99AU-0004348.
XX (UNIV QUEENSLAND)
XX Little M, Yamada T, Holmes G, Georgas K, Kolle G, Wilkinson L;
XX WPI; 2001-343954/36.
PR N-PSDB; AAS11601.
XX
PR Nucleic acids from human chromosome 2p21-16.3 and the encoded peptide, useful for preventing, diagnosing and treating e.g. eye disease, especially cataract formation -
PR Claim 11; Fig 1; 169pp; English.
CC The invention relates to nucleic acids from human chromosome 2p21-16.3 and the encoded peptide (and mouse and chicken orthologues) that comprises a PGECCPIL group, an insulin-like growth factor binding Protein (IGFBP)-like domain, cysteine-rich domains, an RGP (undefined) group and a transmembrane domain. The protein, e.g. CRIM1, interacts with

CC peptides of the transforming growth factor superfamily. A composition comprising an expression construct comprising the nucleic acids of the invention or a mimetic which antagonises or mimics an activity of a CRIM1 polypeptide may be used in a method for modulating the biological activity of a polypeptide of the bone morphogen Protein (BMP) family. CC In this way they may be used to prevent or treat an eye disease, especially cataract formation. They may also be used to treat neurodegenerative diseases, renal and kidney disease, bone and tooth abnormalities, wounds and skin damage, e.g. by use of the nucleic acid in gene therapy by using antibodies directed against CRIM1 polypeptides. CC the present sequence represents human CRIM1 (aka S52).
XX sequence 1036 AA;
SQ Query Match 99.1%; Score 5901; DB 22; Length 1036;
SQ Best Local Similarity 99.2%; Pred. No. 0;
SQ batches 1028; Conservative 3; Mismatches 5; Indels 0; Gaps 0;
SQ 1 MILVAGDRGLAGGGHLVLNSLGLLIPARSPTAVALCPCDESKCERPRNRPGSTWQGV 60
Db 1 MYLVAGDRGLAGGGHLVLNSLGLLIPARSPTAVALCPCDESKCERPRNRPGSTWQGV 60
Qy 61 GGCCTTACAGCAGGCGGFGIXTCGDIKGRVIRPLDMSLFEYAVCDEENWDDLL 120
Db 121 GPKPENENLLAGCININGKCBNTITCSNPFFPSPQMCNLALKREREPEDCSEARCE 180
Db 121 GPKPENENLLAGCININGKCBNTITCSNPFFPSPQMCNLALKREREPEDCSEARCE 180
Qy 181 VQFSPPCPEDSVLTLGGVAPPGSCCPPLSPRCVNPAGCRLRVCPGNNIILWSKASGPGE 240
Db 181 VQFSPPCPEDSVLTLGGVAPPGSCCPPLSPRCVNPAGCRLRVCPGNNIILWSKASGPGE 240
Qy 241 CCDLYZCKPKPGVNCRTVECPYQTQMCPPSPYEVNQVRLTADGCTTAPTCBCLSLICGF 300
Db 241 CCQLYZCKPKPGVNCRTVECPYQTQMCPPSPYEVNQVRLTADGCTTAPTCBCLSLICGF 300
Qy 301 PVCEVESTPRVSYRDGPGKCCDVFECVNDTKPACVFNNEYYGDGMFRMNCRTRCQ 360
Db 301 PVCEVESTPRVSYRDGPGKCCDVFECVNDTKPACVFNNEYYGDGMFRMNCRTRCQ 360
Qy 361 GGAIACTTAQDGEGENCERYVPGECPPCVPVFNPAQGUAANGLLAQRDRREDD 420
Db 361 GGAIACTTAQDGEGENCERYVPGECPPCVPVFNPAQGUAANGLLAQRDRREDD 420
Qy 421 CTFPCQCYNGERHCVAWVQGQCTNPVKVPGECPPCPEEPITVDPAGELSNCLTRK 480
Db 421 CTFPCQCYNGERHCVAWVQGQCTNPVKVPGECPPCPEEPITVDPAGELSNCLTRK 480
Qy 481 DCINGFKRDHNGCCQCINTQCSERKQGCTLNQPGFLTDQANCECECRPRPKCR 540
Db 481 DCINGFKRDHNGCCQCINTQCSERKQGCTLNQPGFLTDQANCECECRPRPKCR 540
Qy 541 PIYDCKPKCPIGLKIKHGKHDICKKKPEPLSCKPGLQODSHGCLICKCREASASAG 600
Db 541 PIYDCKPKCPIGLKIKHGKHDICKKKPEPLSCKPGLQODSHGCLICKCREASASAG 600
Qy 601 PPILSGCTLVDGHKHKNESWHSWGGRCYCINGRMCALITCPVAGNPTHPGQCCP 660
Db 601 PPILSGCTLVDGHKHKNESWHSWGGRCYCINGRMCALITCPVAGNPTHPGQCCP 660
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Db 661 SCADDPFVQKELSTPSIPICHAPGSEYFEGEWNDSDCTOCTCISGRVLCETEVCPPLC 720
Qy 721 ONSRTOSSCOPCTDOPERSRSRNRNVSYPNICKNDRGDFLAMBSWKDVCSCICIDS 780
Db 721 ONSRTOSSCOPCTDOPERSRSRNRNVSYPNICKNDRGDFLAMBSWKDVCSCICIDS 780
Qy 781 VICSFSESCPSCPSVCPSPVLRKGCPYKIDPKKVVCHPSKGKAYADERWLDSCWTC 840
Db 781 VICSFSESCPSCPSVCPSPVLRKGCPYKIDPKKVVCHPSKGKAYADERWLDSCWTC 840
Db 781 VICSFSESCPSCPSVCPSPVLRKGCPYKIDPKKVVCHPSKGKAYADERWLDSCWTC 840

XX WPI; 2001-343951/36.

DR N_FSDB; RAS1102.

QY 901 LWTPSPENDVHLRPMGHIQVQYRDNRNLRHPSEDSSLDLASAVVPIKICISITARFLI 960
 961 NOKKQWIPLLCWYRTPKPSLNNOLVSDCKGTRVQDSSORMLRIAEPDARSGFYS 1020
 Db 1021 MOKNHQADNEYQTV 1036

QY

Db

Ab

QY 961 NOKKQWIPLLCWYRTPKPSLNNOLVSDCKGTRVQDSSORMLRIAEPDARSGFYS 1020
 1021 MOKNHQADNEYQTV 1036

QY

Db

Ab

QY